

### **Amendments To The Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-59. (cancelled)

60. (Currently amended) A method for generating genetically diverse plants via incorporation of exogenous micro-satellite (MS) sequences into the plant genome, said method comprises the steps of:

- (a) obtaining MS-like DNA fragments comprising a monotonous repeat of two to six nucleotides, wherein the DNA fragment ~~repeat~~ has a length of about 70 to about 120 nucleotides long;
- (b) introducing said DNA fragments into plant cells;
- (c) selecting the plant cells containing said DNA fragments; and
- (d) cultivating the selected plant cells, thereby generating genetically diverse plants.

61. (Previously presented) The method of claim 60, wherein the repeat is selected from the group consisting of AT/TA, AG/CT, AAG/CTT, CGG/CCG, ATCG/CGAT, AAAT/ATTT, AAGTTC/GAACTT, CTG/CAG, TTTA/TAAA, CT/AG, and TTC/GAA

62. (Previously presented) The method of claim 60, wherein the MS-like DNA fragments comprise sequences selected from the group consisting of SEQ ID NOs. 1-5.

63. (Previously presented) The method of claim 60, wherein optionally the MS-like DNA fragments obtained in step (a) are ligated into vectors and then proceed to step (b).

64. (Previously presented) The method of claim 60, wherein the MS-like DNA fragments are introduced concomitantly with a selective marker.
65. (Previously presented) The method of claim 64, wherein the selective marker is a gene that confers resistance to an antibiotic, a herbicide or a metabolic inhibitor.
66. (Previously presented) The method of claim 60, wherein the MS-like DNA fragments are introduced by a genetic vehicle selected from the group consisting of a plasmid and a viral vector.
67. (Previously presented) The method of claim 60, wherein the generation of genetically diverse plants further comprises generation of one of cells, seeds or progeny of said plants.
68. (Currently amended) A plant produced by the method of claim 60, and cells, seeds and progeny thereof, wherein the cells of the plant comprise MS-like DNA fragments comprising a monotonous repeat of two to six nucleotides, wherein the DNA fragment has a length of about 70 to about 120 nucleotides long.
69. (New) The method of claim 60, wherein the MS-like DNA fragments are introduced via any one of electroporation, chemical means or liposomes.